

ABSTRACT

A lithographic projection apparatus includes a radiation system for providing a projection beam of radiation having a wavelength λ_1 smaller than 50 nm; a support structure for supporting patterning structure, the patterning structure serving to pattern the projection beam according to a desired pattern; a substrate table for holding a substrate; and a projection system for projecting the patterned beam onto a target portion of the substrate. The apparatus further includes a radiation sensor which is located so as to be able to receive radiation out of the projection beam, said sensor comprising a radiation-sensitive material which converts incident radiation of wavelength λ_1 into secondary radiation; and sensing means capable of detecting said secondary radiation emerging from said layer.